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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,587	04/03/2001	Lorraine D. Butlin	ISA-051.01	8700

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EXAMINER	
NGUYEN, BAO THUY L	
ART UNIT	**PAPER NUMBER**
1641	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,587	BUTLIN ET AL.	
	Examiner	Art Unit	
	Bao-Thuy L. Nguyen	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-50 and 55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-50 & 55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment dated 27 December 2005 has been entered. Claim 55 has been added. Claims 1-21 and 51-54 have been canceled. Claims 22-50 and 55 are currently pending.

Claim Rejections - 35 USC § 112

2. Claims 55 and 22-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 55 is vague and indefinite because it is unclear how the menopausal status of the female is related to the relative abundance of the different states of the analyte. In other words, when is the female classified as menopausal? When the first and second state of the analyte is at a specific amount? or when only the first state of the analyte is at a specific amount? or when only the second state of the analyte is at a specific amount? or when either the first state or second state is in a certain range?

It is unclear how the "relative abundance" is defined?

Part (b) of claim 55 is confusing with respect to the specificities of the binding agents for the analyte. Does this mean that either the first or second binding agent is more specific for state 1 or state 2 of the analyte? This statement has many possibilities and is vague. Exactly what is the binding agent specific for?

Part (f) is confusing because it is unclear how the amount of analytes in the first and second assays is related to the menopausal status of the female. Part (a) of claim 55 recites that the analytes exist in two different states and their relative abundance is related to the menopausal status of the female; however, there is no mention of the various states of the analyte nor their "abundance" in determining the menopausal status.

Part (f) is also confusing with respect to the recitation of "at least in part" because this appears that the diagnosis of menopause is also based upon other factors which are not recited and thus the claimed method alone is not sufficient to make this diagnosis.

Claims 23, 29 and 38 are confusing with respect to the recitation of "calculating a combined test results, expressed as a ratio of the amounts of ...complex formed in each of the.." assay. The recitation of "combined" implies some sort of total, therefore, it is unclear how the total is expressed as a ratio which inherently possesses at least two numerical values.

Applicant argues that the rejection based on the failure of applicant to claim his invention is not appropriate because the invention set for the in the claims must be presumed, in absence of evidence to the contrary, to be that which applicants regard as their invention.

This argument is not persuasive because evidence that shows that a claim does not correspond in scope with that which applicant regards as applicant's invention may be found, for example, in contentions or admissions contained in briefs or remarks filed

by applicant, Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 55 USPQ2d 1279 (Fed. Cir. 2000); In re Prater, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969), or in affidavits filed under 37 CFR 1.132, In re Cormany, 476 F.2d 998, 177 USPQ 450 (CCPA 1973). In the arguments submitted 5/18/05, page 9, applicant states that the relative amount of each form of the analyte is being sought and detected. Clearly, this is not accomplished in the previously pending claim 21 nor the currently pending claim 55. The claim is inconsistent with the subject matter which applicants regard as their invention. Pending claim 55 does not recite a detection of *each* form of the analyte, as argued. Thus, there is clearly a failure to claim what applicant regards as the invention.

3. Claims 55 and 22-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification on page 9, lines 6-10 teaches the analysis of FSH samples using a pair of novel anti-FSH monoclonal antibodies that distinguish between pre-menopausal and post-menopausal FSH samples. The specification further teaches that for more accurate diagnosis of menopausal conditions the assay results should be determined numerically, and expressed as a ratio of the signals of the first and second assays. A significant change in this ratio can indicate transition from a pre-menopausal

to a post-menopausal state. Thus, the results from a series of contemporaneous tests performed, for example, every few weeks, can be collated and any change in the observed signal ratio as compare to a control is used to diagnose a change in condition. Page 11, lines 5-19.

The specification does not teach the method of claim 55, mainly the performance of a one-step and two-step assays on contemporaneous samples from the same source and determining the menopausal status of a female subject based at least in part on the amounts of the analyte in each of the assay.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 55 and 22-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al (US 4,900,662) in view of Creus et al., (Clinical Endocrinology. 1996 February. Vol. 44, No. 2, pp. 181-189).

Shah discloses a method for measuring of an analyte pair consisting of the native protein and an initial, altered form of the native protein. Both measured values being useful for diagnosis. See column 1, lines 48-57. Specifically, Shah discloses a method

for determining the initial elevated concentration level of CK-MM_A in patient serum following a myocardial infarction comprising determining the combined concentration of CK-MM_A and CK-MM_B. Shah discloses the use of anti-CK-MM antibody bound to a solid support and labeled antibodies for the capture and determination of the CK-MM_{A+B}. See column 4, line 35 through column 5, lines 20. Shah discloses simultaneous as well as step-wise process for the determination of CK-MM_A and CK-MM_B. Shah teaches that the combined levels of CK-MM_A and CK-MM_B provide a more accurate estimate of the time of infarction. See column 5, lines 45-49. The amount of the analyte pair and the ratio of native protein to the analyte pair are accurately determined the time of the initiation of the acute disease. Shah teaches the use of polyclonal and/or monoclonal antibodies and kits containing them for use in the method.

See the discussion of Shah above. Shah differs from the instant invention in failing to teach the measurement of gonadotrophic hormones such as follicle-stimulating hormone (FSH) and relating it to the menopausal status of a human female.

Creus, however, discloses the characterization of an analyte belonging in the gonadotrophin family, specifically, serum FSH isoforms according to the carbohydrate structure inner to the sialic acid residues. Results from these studies are expressed in IU/I and as B/I ratios. See page 182, table 1 and page 187.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assay taught by Shah for the detection of hormones such as FSH taught by Creus and to express the results in terms of ratios

because Creus shows that such method is well known and is conventional in the art. A skilled artisan would have been motivated to use the method taught by Shah to measure different isoforms of FSH because Shah discloses that diagnosis of acute disease is often based on abnormal levels of disease markers such as hormones in biological fluids, particularly when they change momentarily during the acute phase, and Creus teaches the a woman's endocrine status affect the circulating FSH isoforms, therefore, a complete evaluation of FSH using the immunoassays taught by Shah would have been desirable and convenient with the use of antibodies.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 55 and 22-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-23, 26-28, 31-38 of copending Application No. 10/780,904 in view of Shah (US 4,900,662).

'904 discloses two sandwich immunoassays to detect different isoforms of gonadotropin in samples from human females and relating the results to the menopausal status of the female. '904 differs from the instant invention in failing to teach that the assays are step-wise and simultaneous. Shah, however, discloses simultaneous as well as step-wise process for the determination of CK-MM_A and CK-MM_B. Shah teaches that the combined levels of CK-MM_A and CK-MM_B provide a more accurate estimate of the time of infarction. Therefore, it would have been obvious to perform the assays of '904 in a step wise as well simultaneous formats because such formats are well known in the art as taught by Shah.

This is a provisional obviousness-type double patenting rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and

any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao-Thuy L. Nguyen whose telephone number is (571) 272-0824. The examiner can normally be reached on Tuesday and Wednesday from 8:00 a.m. -4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bao-Thuy L. Nguyen
Primary Examiner
Art Unit 1641
3/23/06